In The Claims

Please amend the claims as follows:

1. (Previously presented) A system for irradiating a pallet, comprising:

a source of radiation having first and second states for directing the radiation in a first plane toward the pallet in the first state and for not directing radiation toward the pallet in the second state,

a holder having first and second states for moving the pallet in a second plane substantially perpendicular to the first plane during the first state of the source and for preventing any movement of the pallet in the second state of the source, and

a motor having first and second states of operation for rotating the pallet on an axis substantially corresponding to the second plane during the second state of the source of radiation;

wherein the motor rotates the pallet through a particular angle each time that the source of radiation and the holder are in the second state.

2. (Previously presented) The system set forth in claim 1, the source of radiation providing x-rays.

3. (Previously presented) The system set forth in claim 1, a magnetic lens assembly for converging the radiation from the source at a particular position in the pallet during the first state of the source of radiation.

4. (Previously presented) The system set forth in claim 3 wherein the motor is operable to rotate the pallet on the particular axis during the second state of the source of radiation and the holder.

5. (Previously presented) The system set forth in claim 3 wherein the magnetic lens assembly converges the radiation from the source at the particular position on the pallet after each successive rotation of the pallet on the particular axis.

6. (Previously presented) The system set forth in claim 5 wherein the source of radiation provides x-rays.

7. (Cancelled)

8. (Cancelled)

9. (Previously presented) A system for irradiating a pallet, comprising:

a source of radiation for producing radiation in a first direction, and

a magnetic lens for focusing the radiation at a particular position in the pallet in a direction different from the first direction.

10. (Currently amended) The system set forth in claim 9 wherein the magnetic lens focuses the radiation at a ~~the~~ center of the pallet.

11. (Previously presented) The system set forth in claim 9 wherein a converter is provided to obtain the radiation as x-rays.

12. (Currently amended) The system set forth in claim 9 wherein the ~~pallet is provided with a side defined by opposite extremities and wherein the~~ magnetic lens is constructed to pass the radiation into the pallet ~~through the side between one extremity of the side and a median position on the side~~ to focus the radiation at the center of the pallet.

13. (Currently amended) The system set forth in claim 9 wherein the ~~pallet is provided with a side defined by opposite extremities and wherein the~~ radiation is defined by x-rays and wherein a converter converges the x-rays ~~after the x-rays pass through the side, between one extremity of the side and the median position on the side,~~ to focus the converging x-rays at the center of the pallet.

14. (Previously presented) The system set forth in claim 13 wherein the radiation initially constitutes electron beamlets and wherein the electron beamlets are converted to x-rays before the electron beamlets reach the pallet.

15. (Previously presented) The system set forth in claim 14 wherein the magnetic lens includes a scan horn and a dipole magnet for producing electron beamlets and for bending the electron beamlets to focus the electron beamlet at a particular position in the pallet and wherein a

converter converts the electron beamlets to x-rays and focuses the x-rays at the particular position in the pallet.

16. (Currently amended) The system set forth in claim 9 wherein the ~~pallet is provided with a side defined by opposite extremities and wherein the~~ magnetic lens irradiates approximately one eighth of the cross sectional area of the pallet, the irradiated eighth being defined by lines extending radially from one extremity of the side of the pallet and a median position in the side of the pallet.

17. (Previously presented) The system set forth in claim 16 wherein the radiation constitutes x-rays.

18. (Previously presented) A system for irradiating a pallet, comprising:

a source of radiation having energized and de-energized states, magnetic members for focusing the radiation from the source on the center of the pallet, with the pallet non-rotary, to irradiate a first portion of the pallet,

a control for energizing the source of radiation, and

a drive member for rotating the pallet through a particular angle, with the source of x-rays not being energized, to the pallet after the irradiation of the first portion of the pallet, the source of radiation being thereafter operative to energize another portion of the pallet, with the pallet non-rotary, and to focus the radiation from the source toward the center of the pallet.

19. (Previously presented) The system set forth in claim 18 wherein the source of radiation provides x-rays.

20. (Previously presented) The system set forth in claim 18 wherein the pallet is rotatable on a particular axis and wherein the pallet is rotatable on the particular axis after the energizing of the pallet by the radiation from the source.

21. (Currently amended) A system for irradiating a pallet having a plurality of sides, comprising:

a source of radiation having energized and de-energized states, and

a scan horn and a dipole magnet constructed and disposed relative to each other to irradiate, with the radiation from the source, a portion of the pallet;

wherein the pallet is not rotated when the source of radiation is in the energized state ~~defined by the center of the pallet, one of the opposite extremities of one side of the pallet and a median position in the side of the pallet~~.

22. (Previously presented) The system set forth in claim 21 wherein the radiation is provided in a particular plane and wherein a member is provided for rotating the pallet on an axis substantially perpendicular to the plane of the radiation.

23. (Currently amended) The system set forth in claim 21 wherein the radiation is provided in a particular plane and wherein a member is provided for moving the pallet in a

direction substantially perpendicular to the plane of the radiation during the time that the pallet receives the radiation from the source ~~and wherein the pallet is not rotated during the time that the radiation is directed toward the pallet~~.

24. (Previously presented) The system set forth in claim 23 wherein a member is provided for rotating the pallet on an axis substantially perpendicular to the plane of the radiation during the time that the pallet is not receiving radiation from the source.

25. (Previously presented) The system set forth in claim 24 wherein a control system provides for

(a) the passage of radiation to the pallet during a first period and the movement of the pallet in the substantially perpendicular direction, without any rotation of the pallet, during the first period,

(b) the rotation of the pallet in a second period of time after the first period of time without any passage of radiation to the pallet and without any movement of the pallet in the perpendicular direction and without the passage of radiation to the pallet, and

(c) the passage of radiation to the pallet and the movement of the pallet in the substantially perpendicular direction, without any rotation of the pallet, during a third period of time after the second period of time.

26. (Previously presented) The system set forth in claim 25 wherein the radiation from the source irradiates a first eighth of the volume of the pallet during the first period and a second

eighth of the volume of the pallet different from the first eighth during the third period and wherein the first and second eighths of the pallets extend from different extremities of the pallet to the center of the pallet.

27. (Currently amended) A system for irradiating a pallet, comprising:

a source of radiation,

magnetic members constructed and disposed relative to one another for bending the radiation from the source to pass through one side of the pallet ~~in the positions between the opposite extremities of the sides~~ to a focused position on the pallet,

a first member for rotating the pallet relative to the magnetic members,

a control system for initially providing for a radiation from the source to the pallet without any rotation of the pallet, then for a rotation of the pallet relative to the magnetic members and then for another radiation from the radiation source to the pallet without any rotation of the pallet.

28. (Previously presented) The system set forth in claim 27 wherein a converter is provided for converting the radiation to x-rays.

29. (Previously presented) The system set forth in claim 27 wherein the focused position is at the center of the pallet and wherein radiation is not directed from the source to the pallet while the pallet is rotating.

30. (Previously presented) The system set forth in claim 27 wherein the source of radiation provides electron beamlets and wherein a converter converts the electron beamlets to x-rays and directs the x-rays to the focused position on the pallet.

31. (Previously presented) The system set forth in claim 27 wherein the focused position is at the center of the pallet and wherein radiation is not directed from the source to the pallet while the pallet is rotating and wherein the source of radiation provides electron beamlets and wherein a converter converts the electron beamlets to x-rays and directs the x-rays to the focused position on the pallets.

32. (Previously presented) A method of irradiating a pallet, comprising the steps of:

directing radiation in a first plane from a source to the pallet,

providing a magnetic lens to focus the radiation in the first plane at a central position in the pallet while the radiation is directed to the pallet, and

moving the pallet past the radiation in a direction substantially perpendicular to the first plane during the direction of the radiation from the source to the pallet.

33. (Previously presented) The method as set forth in claim 32, further comprising the steps of:

preventing the radiation from reaching the pallet after the pallet has moved in the direction substantially perpendicular to the first plane, and

rotating the pallet on an axis extending in the first plane through the pallet while radiation from the source is prevented from reaching the pallet.

34. (Previously presented) The method as set forth in claim 32 wherein the pallet is rotated through an angle of substantially 90° on an axis extending in the first direction through the center of the pallet while radiation from the source is prevented from reaching the pallet.

35. (Previously presented) The method as set forth in claim 32 wherein the radiation constitutes x-rays.

36. (Previously presented) The method as set forth in claim 32 wherein the radiation is directed in a first direction in the first plane and wherein the radiation is scanned in the first plane and wherein the scanned radiation is thereafter converted to a radial direction in the pallet in the first plane and is focused at the center of the pallet.

37. (Previously presented) The method as set forth in claim 32 wherein the pallet is rotated through an angle of 90° on an axis extending in the second direction through the pallet after the pallet has moved in the second direction substantially perpendicular to the first direction and wherein the radiation is interrupted during the rotation of the pallet and wherein the radiation constitutes x-rays and wherein the radiation is scanned in a second plane substantially perpendicular to the first plane and to the first direction and wherein the radiation is thereafter converted to a radial direction having a center at the center of the pallet.

38. (Currently amended) A system, comprising:

a scan horn for scanning charged particles through a particular angle in a particular plane,

a dipole for bending the charged articles to extend in a particular direction through the pallet, and

a converter for converting the charged particles to x-rays and directing the x-rays in the particular direction through the pallet;

wherein the converter has an arcuate periphery and wherein the charged particles pass to the center of the pallet through the arcuate periphery in a direction substantially perpendicular to the arcuate periphery.

39. (Previously presented) The system set forth in claim 38 wherein the converter directs the x-rays through the pallet in a radial direction converging at the center of the pallet.

40. (Cancelled)

41. (Currently amended) The system set forth in claim 38 ~~40~~ wherein an air gap is disposed between the arcuate periphery of the converter and the pallet.

42. (Currently amended) The system set forth in claim 38 ~~40~~ wherein the dipole varies the direction of the charged particles into a radial direction converging at the center of the pallet and wherein the converter has an arcuate periphery and wherein the charged particles pass to the

center of the pallet through the arcuate periphery of the converter in a direction substantially perpendicular to the arcuate periphery of the converter and wherein an air gap is disposed between the arcuate periphery of the converter and the pallet.

43. (Previously presented) The system set forth in claim 39 wherein the converter has a planar periphery and wherein the charged particles pass through the planar periphery of the converter and the pallet to the center of the pallet in a direction substantially perpendicular to the planar periphery.

44. (Cancelled)

45. (Cancelled)

46. (Cancelled)

47. (Cancelled)

48. (Cancelled)

49. (Cancelled)

50. (Cancelled)

51. (Cancelled)

52. (Cancelled)

53. (Cancelled)